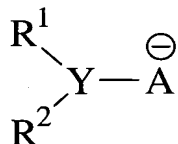


Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A composition of matter comprising a ligand having the formula:



where

A is ~~CH₂, CHR³, CR³R⁴~~; NR³, O, S, or PR³;

R¹ and R² are independently ~~hydrogen, aryl~~, C₆₋₁₅ diarylphospho, C₁₋₁₈ alkylthio, C₆₋₁₅ arylthio, ~~C₇₋₁₅ aralkyl~~, C₁₋₁₀ alkoxy, C₆₋₁₄ aryloxy, C₁₋₁₀ dialkylamino, or C₆₋₁₅ diarylamino; R³ and R⁴ are independently hydrogen, C₁₋₈ alkyl, C₆₋₁₀ aryl; and

Y is B, Al, or Ga.

2. (Cancelled)

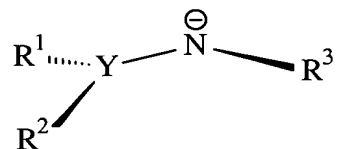
3. Cancelled)

4. (Cancelled)

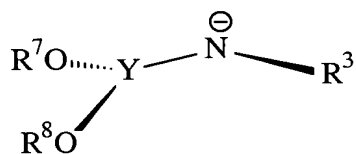
5. (Cancelled)

6. (Cancelled)

7. (Previously Amended) The composition of claim 1 wherein said ligand has the formula:



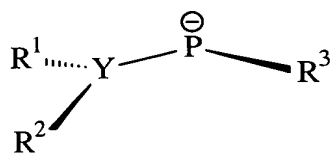
8. (Previously Amended) The composition of claim 7 wherein said ligand has the formula:



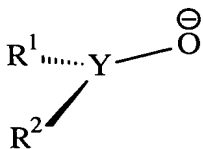
where

R^7 and R^8 are independently C_{1-8} alkyl, C_{6-10} aryl, or C_{7-15} aralkyl.

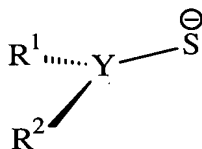
9. (Previously Amended) The composition of claim 1 wherein said ligand has the formula:



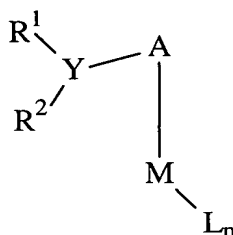
10. (Previously Amended) The composition of claim 1 wherein said ligand has the formula:



11. (Previously Amended) The composition of claim 1 wherein said ligand has the formula:



12. (Currently Amended) A polymerization catalyst comprising an activator and a compound complex having the formula:



where

M is a Group 3 to 10 transition metal;

L is a sigma bonded or pi bonded ligand;

n is an integer such that the valency of M is satisfied;

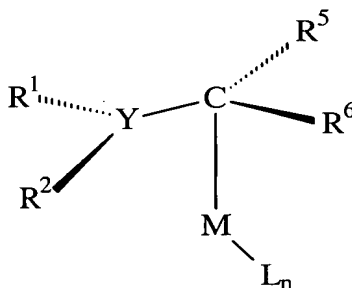
A is CH₂, CHR³, CR³R⁴, NR³, O, S, and PR³;

R¹ and R² are independently ~~hydrogen, aryl,~~ C₆₋₁₅ diarylphospho, C₁₋₁₈ alkylthio, C₆₋₁₅ arylthio, ~~C₇₋₁₅ aralkyl,~~ C₁₋₁₀ alkoxy, C₆₋₁₄ aryloxy, C₁₋₁₀ dialkylamino, or C₆₋₁₅ diarylamino;

R³ and R⁴ are independently hydrogen, C₁₋₈ alkyl, C₆₋₁₀ aryl, C₇₋₁₅ aralkyl, C₁₋₁₀ alkoxy, C₆₋₁₄ aryloxy, C₁₋₁₀ dialkylamino, or C₆₋₁₅ diarylamino; and

Y is B, Al, or Ga.

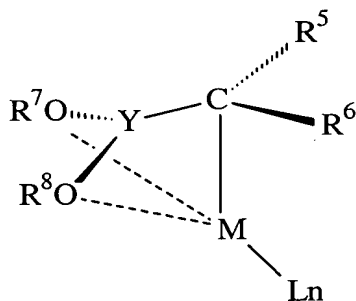
13. (Currently Amended) The polymerization catalyst of claim 12 wherein said ~~compound~~ complex has the formula:



where:

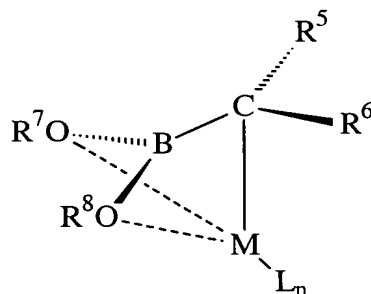
R⁵ and R⁶ are independently hydrogen, a C₁₋₈ alkyl group, C₆₋₁₀ aryl group, C₇₋₁₅ aralkyl group, C₁₋₁₀ alkoxy group, C₆₋₁₄ aryloxy group, C₁₋₁₀ dialkylamino group, or C₆₋₁₅ diarylamino group.

14. (Currently Amended) The polymerization catalyst of claim 12 wherein said ~~compound~~ complex has the formula:

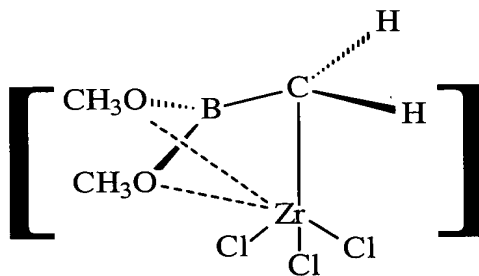


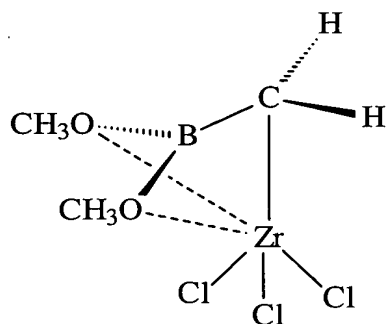
where R⁷ and R⁸ is hydrogen, a C₁₋₈ alkyl group, C₆₋₁₀ aryl group, or C₇₋₁₅ aralkyl group.

15. (Currently Amended) The catalyst of claim 12 wherein said compound complex has the formula:

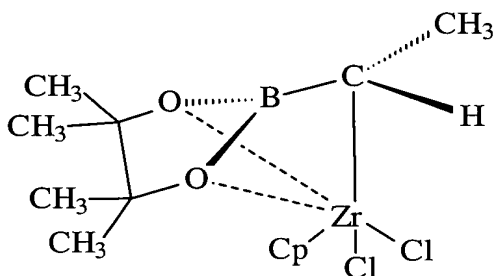


16. (Currently Amended) The catalyst of claim 12 wherein said compound complex has the formula:

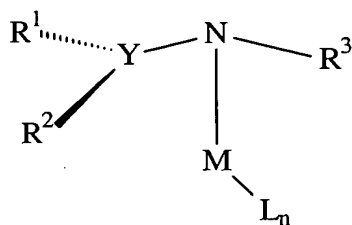




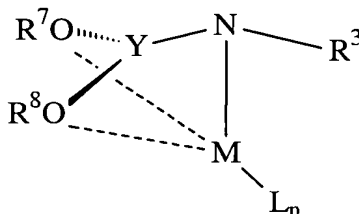
17. (Currently Amended) A catalyst comprising a ~~compound~~ complex having the structure:



18. (Currently Amended) The catalyst of claim 12 wherein said ~~compound~~ complex has the formula:



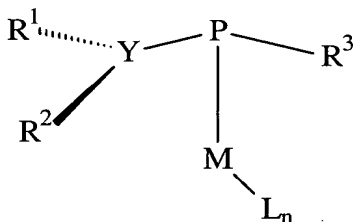
19. (Currently Amended) The catalyst of claim 12 wherein said ~~compound~~
complex has the formula:



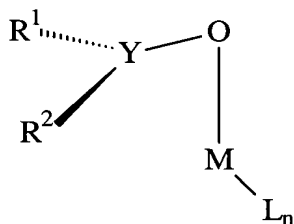
where

R⁷ and R⁸ are independently a C₁₋₈ alkyl group, C₆₋₁₀ aryl group, or C₇₋₁₅
aralkyl group.

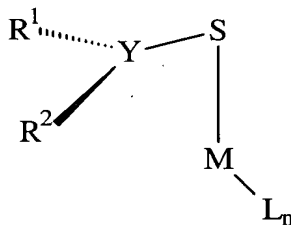
20. (Currently Amended) The catalyst of claim 12 wherein said ~~compound~~
complex has the formula:



21. (Currently Amended) The catalyst of claim 12 wherein said ~~compound~~
complex has the formula:



22. (Currently Amended) The catalyst of claim 12 wherein said ~~compound~~
complex has the formula:

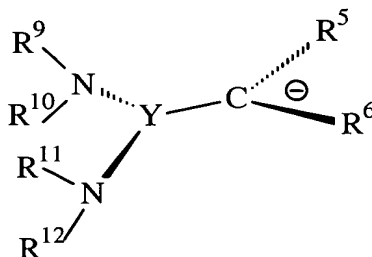


23. (Original) A process for the oligomerization or polymerization of at least one α -olefin, said process comprising polymerizing said at least one α -olefin in the presence of a polymerization catalyst component comprising the polymerization catalyst of claim 12.

24. (Original) A polyolefin or oligoolefin prepared by the process of claim 23.

25. (Cancelled)

26. (New) A composition of matter comprising a ligand having the formula:



where

R⁵ and R⁶ are independently hydrogen, a C₁₋₈ alkyl group, C₆₋₁₀ aryl group, C₇₋₁₅ aralkyl group, C₁₋₁₀ alkoxy group, C₆₋₁₄ aryloxy group, C₁₋₁₀ dialkylamino group, or C₆₋₁₅ diarylamino group.

R⁹, R¹⁰, R¹¹, and R¹² are independently C₁₋₈ alkyl, C₆₋₁₀ aryl, or C₇₋₁₅ aralkyl;

Y is B, Al, or Ga.

27. (New) The catalyst of claim 12 wherein the transition metal is a Group 3 to Group 6 transition or lanthanide metal.

28. (New) The catalyst of claim 12 wherein the transition metal is a Group 4 transition metal.

29. (New) The catalyst of claim 12 wherein the activator is an alumoxane, and alkylaluminum compound, a trialkyl- or triarylboron compound, or an ionic borate or aluminate compound.